PHERBELLIA STYLIFERA ROZKOŠNÝ, A MEMBER OF THE SNAIL-KILLING FAMILY SCIOMYZIDAE (DIPTERA) NEW TO BRITAIN FROM CAMBRIDGESHIRE

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Abstract: A female sciomyzid identified as *Pherbellia stylifera* Rozkošný, 1982 is reported from Britain after unsuccessful efforts to find a male. A brief description is given to distinguish it from similar species and some other scarce sciomyzids are noted from the capture site.

INTRODUCTION

A single female *Pherbellia* of unfamiliar and distinctive appearance was found on 18 viii 1998 at the Osier Lake private nature reserve, Godmanchester, Cambridgeshire at grid reference TL2672. It has a distinctly shining brown thorax and prominently black fore legs. Reference to Rozkošný (1984 and 1991) indicated *stylifera* Rozkošný 1982 as the best fit with some doubts which were mostly resolved by Rozkošný (1982) which has a more detailed description including differences between the sexes, while the later works, which were consulted first, refer principally to males. *Pherbellia stylifera* is apparently known only from the holotype male from Finland and the paratype female from Sweden, both in provinces bordering the Baltic Sea.

DESCRIPTION AND COMPARISON WITH SIMILAR SPECIES

Salient features of the Cambridgeshire female are given here, with differences from the paratype female (Rozkošný 1982) in parentheses: head unusually broad, frons distinctly wider than long and hardly narrowing anteriorly, depth of jowls about one-quarter eye height. Face and jowls pale yellow, frons and occiput darker with a large supra-cervical greyish white patch. Orbital plates brown, shining through thin pale pollinosity, mid frontal stripe indistinct and not reaching level of anterior orbital setae. Basal segments of antennae yellow, third segment narrowing sharply beyond insertion of arista then parallel sided to the rounded apex, brownish-yellow (but not darkened in the antero-apical half). Arista brown, long pubescent, hairs on upper side distinctly longer than width of arista at base (not hardly longer). Mesonotum, scutellum and pleurae brown, distinctly shining through thin yellowish pollinosity. Mesopleuron bare, pteropleuron with 5 quite strong setae (6–9 in male, female not specified). Notopleuron without hairs round the anterior seta. Abdomen shining brown. Mid and hind legs yellow, fore legs strongly contrasting deep black except yellow coxae, trochanters, basal fifth and extreme tip of femora and basal fifth of tibiae. Hind femora with 3 anterodorsal setae in the apical half. Wings with lightly infuscated cross veins, and rather narrow. Body length 4.7 mm (4.4 mm), wing length 4.0 mm.

Among females of *Pherbellia* species with the mesopleura bare and a short mid frontal stripe, *stylifera* most resembles *scutellaris* (von Roser), *rozkosnyi* Verbeke and *sordida* (Hendel). *Pherbellia scutellaris* has a variable mesonotum from yellowish to dark brown but always more thickly pollinose than *stylifera* and the pleurae are also matt pollinose. The frons is narrower (slightly longer than wide), the occiput, mid

frontal stripe and orbital plates are grey pollinose, the fore femora are yellow brown and the hind femora usually have brown spots on either side of the apex. *Pherbellia rozkosnyi* closely resembles *scutellaris*, but the mesonotum is always dark and densely grey pollinose, while *sordida* is similar but has brown fore legs and, like *stylifera*, lacks the apical brown spots on the hind femora. Rozkošný (1984) notes that *stylifera* has some affinity with *pallidiventris* Fallén, but does not specify what the affinities are. The mesonotum of *pallidiventris* is dark and the whole thorax is heavily grey pollinose, also the lower front margin of the eye is almost right angled in contrast to the very obtuse margin in *stylifera*. The author considers therefore that this specimen represents *Pherbellia stylifera*, but in the absence of a male the possibility exists that it is a closely related but undescribed species.

Probable biology

Almost all sciomyzids are known to have malacophagous larvae which feed by various strategies mainly on several families of land and aquatic snails. *Pherbellia* is a large genus with over forty Palaearctic species, and in those whose life histories are known the larvae feed in terrestrial and aquatic pulmonate snails as parasitoids, that is they start as parasites in the living snail, but eventually kill the host and consume the remains, and may then complete their development as predators on other snails. Few *Pherbellia* species appear to be host specific and some will use hosts from more than one snail family. The life history of *P. stylifera* is unknown but will probably prove to conform to the general *Pherbellia* strategy.

Capture site

The author first visited the Osier Lake reserve on a British Entomological & Natural History Society field meeting held jointly with the Huntingdonshire Fauna and Flora Society in June 1997 at which he found several fly species new to VC31, so permission was obtained to continue recording and the *Pherbellia* was found in the following year. During the next two years a number of visits were made in the hope of finding a male to confirm the identification, but without success. One visit in August 2000 was with Dr Ian McLean, organizer of the sciomyzid recording scheme, but following heavy rain, collecting conditions were less than ideal. The Osier Lake reserve is part of a large complex of worked-out sand and gravel pits now being restored and landscaped as a nature reserve, but is sheltered and secluded by a belt of *Salix* carr on three sides and was itself restored about 15 years ago. The *Pherbellia* was swept from round a pond with a rich emergent and marginal flora in an open area of marsh with osiers (*Salix viminalis*) and lush vegetation. Within the area of less than a hectare the author has recorded 23 sciomyzid species with another 5 by the adjacent lake shore and a small area of drier grassland. Noteworthy species include *Colobaea bifasciella* (Fallén), *C. distincta* (Meigen), *C. pectoralis* (Zetterstedt), *Pherbellia nana* (Fallén), *Pteromicra pectorosa* (Hendel), *Sciomyza dryomyzina* Zetterstedt and *S. simplex* Fallén.

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SHORT COMMUNICATION

***Calocoris alpestris* (Meyer-Dür), *Lygus wagneri* Remane and *Dicyphus constrictus* (Boheman), species with boreo-montane or boreo-alpine distributions expanding in Gloucestershire.**—The heteropteran fauna of Gloucestershire has recently been described in detail (Alexander, 1995 & 1996), making it possible to analyse the fauna and identify trends. One of the more noticeable recent trends has been the expansion of species that are largely of a northern and western distribution in Britain and either boreo-montane (the first two species) or boreo-alpine (the last) in Europe (Southwood, 1957). These might have been expected to be contracting in range in line with human-induced climate change. Prior to the start of the project only *Calocoris alpestris* had been reported from the county (Ackland, 1958) while both *Lygus wagneri* and *Dicyphus constrictus* were yet to be noticed locally. These are all largely species of damp woodlands, associated with tall ground vegetation.

Calocoris alpestris

Calocoris alpestris lives on nettle in or at the margins of damp woods. It is a large and obvious bug and so a surprising omission from the earlier lists; it has presumably increased in abundance locally, conceivably being a recent colonist. It was first noticed in the county in 1957 at Tockington (ST68) and subsequently at Waterley Bottom (ST79) in 1958 (Ackland, 1958). Since then the present author has found it in twelve further woodland sites, throughout the Cotswold dip slope:

SO80 Watledge Hill, 3.vi.1985; Rabbit Warren Wood, Selsley, 25.v.1998.
SO90 Hailey Wood, 5.vi.1993; Francombe Wood & Pinbury Park, 21.vi.1998.
SO92 Dowdeswell Wood, 29.v.1995.
SP00 Perrotts Brook, 4.vi.1995; Ampney Riding, 14.vi.1998.
SP01 Chedworth Woods, 31.v.1993.
SP02 Guiting Wood, 31.v.1993.
ST78 Lower Woods, 31.v.1997.
ST79 Alderley Wood, plentiful, 23.v.1998.

J. P. Widgery (pers.comm.) has also subsequently found it in some of these as well as additional sites, and A. P. Foster in one further site. The first record from the Wye Valley was made in 2000 by P. Kirby.

Lygus wagneri

Lygus wagneri was only discovered in the county in 1988. It feeds on a wide variety of herbs in woodland clearings and margins, and hedgerows: dock, nettle, St John's wort, etc. The present author has found it in a total of six woods across the Cotswolds, while J. P. Widgery has recently added a seventh.